

Bringing Unified Communications to Life with Seamless Video Interoperability

**A Revealing Look at why Integrating Video
with Unified Communications is a Winning
Long-Term Strategy**

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September 2010

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Executive Summary

Video in the enterprise is growing by leaps and bounds. We estimate that over 50,000 additional video endpoints are added within enterprises every quarter. These endpoints run the gamut from high end telepresence suites to high definition group conferencing units to video kiosks. And, this does not count desktop and mobile video that are also beginning to emerge on laptops, smartphones and consumer devices used by business professionals.

So how do organizations deal with this massive influx of new video capabilities? In spite of the fact that most enterprises still deploy video as a standalone capability, recent market research indicates that enterprises are increasingly recognizing the need to integrate video in with the rest of the enterprise communications fabric; that is, to create an integrated, unified communications infrastructure that includes all of the communications capabilities people need while providing them in an easy to use and consistent way. To obtain the greatest benefit from these individual components, enterprises are moving toward unified communications environments in which phones can call video units; IM sessions can escalate to voice, video, and data conferences; and users can seamlessly and effortlessly utilize any communications mechanism available to them.

Companies deploying video can leverage for key advantages when the video solution is tightly integrated in a unified and consistent way with the enterprise's unified communications environment: reduced management overhead, consistent user experiences across devices, higher quality of service, easier integration into line of business applications. The better unified communications architectures allow for SIP-based video and telephony devices to seamlessly join in while continuing support for investments in legacy H.323 and H.320 systems. Integrating control of the video endpoints into the domain of the enterprise unified communications call control server removes the silos between enterprise telephone systems and enterprise video systems while providing a consistent calling and user experience.

One powerful architecture for integrating video with the rest of the unified communications infrastructure is Avaya Aura™. Aura allows full integration of legacy H.323 and H.320 video units with newer SIP-based group, telepresence, and even desktop video solutions, all through a common and consistent calling model. Using such a solution makes management of the entire unified communications solution less onerous for the IT staff while providing a consistent user experience across video devices. Avaya's video network operations centers can help enterprises create a cogent video strategy while providing strategic guidance about best practices for integrating video with the enterprise communications infrastructure. They can also provide deployment services as well as solution management and monitoring after an integrated video solution has been installed.

In this white paper we discuss the video solutions available today and provide a snapshot of the current video market. We discuss how video can be integrated with the unified communications environment, why this is a good idea, and the benefits that organizations will get by creating a unified communications strategy that includes video. We provide the ROI and customer evidence to illustrate that video-enabled unified communications is useful to real businesses. We close with compelling examples in which video is integrated with voice and collaboration as part of an overall unified communications framework.

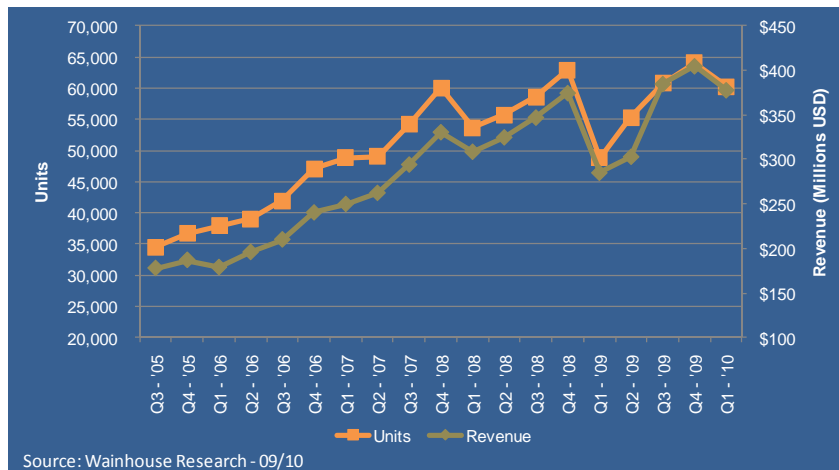
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Enterprise Video: the New Normal for Business Communications

Enterprise video is on the march! The growth of deployed business video units has been phenomenal over the last five years, increasing at a compound annual growth rate of 14%. Every quarter, over 50,000 additional video units are deployed! Video market growth has continued during both economic upswings and downturns because video delivers costs savings tools that also boost worker efficiency.

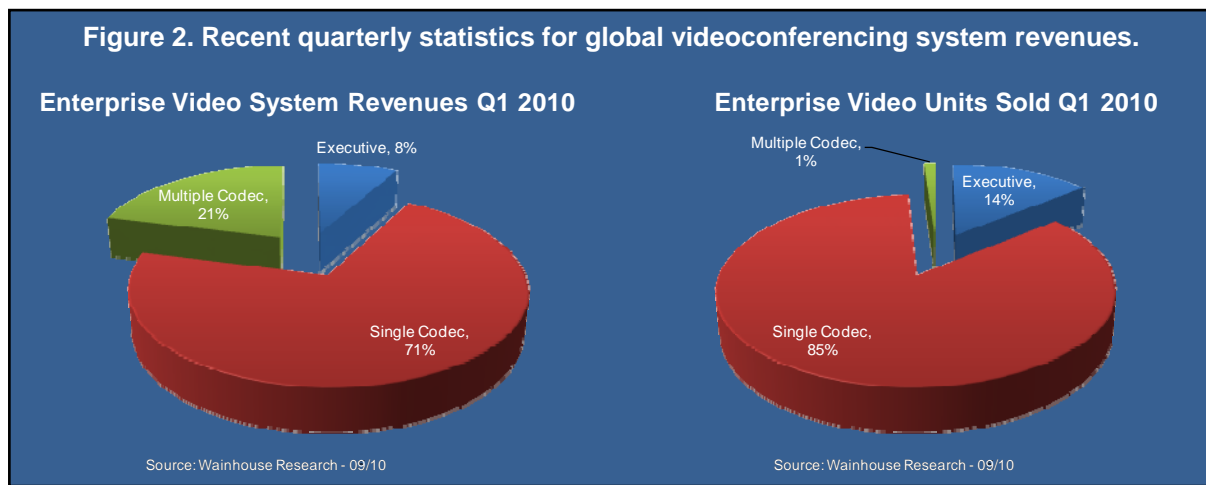
Figure 1. Group videoconferencing growth on a global basis.



Market growth has also been fueled by customer interest in high definition systems and in telepresence suites. Telepresence has come from almost zero annual revenue five years ago to a point where it now represents approximately 14% of the total market on a revenue basis (but less than 1% on a unit basis).

Visual communications proves its value day in and day out, helping to build trust and understanding between colleagues as well as with suppliers, partners, and customers. A video call enables personal engagement, improved understanding and non-verbal all feedback at the same time. Enterprises are now extending video beyond the meeting room, across the organization, and into customer service applications. The key lies in developing a well-conceived communications strategy that removes video silos by unifying video with other ad hoc, multimodal communications mechanisms in the enterprise such as

Figure 2. Recent quarterly statistics for global videoconferencing system revenues.



voice, instant messaging and presence, web collaboration, and multiparty audio conferencing.

Savvy enterprise managers understand that the highest return on any communications technology investment will be achieved only when that technology is embedded into the enterprise workflow, embraced by the users, and supported by the IT infrastructure. As yesterday's economic uncertainties become today's opportunities, enterprises are finding that business cases can be built for integrated voice, video, and data solutions based on benefits in three areas:

1. Cost improvements based on travel reduction;
2. Business transformation based on faster decision making, improved communications with customers and supply chain partners, and shortened time-to-market for product developments; and
3. Responsible energy usage resulting from electronic communications' replacing local and/or long distance travel.

As video communications become the new business normal, customers are seeking reliable solutions that will seamlessly integrate personal video solutions delivered as part of a unified communications environment with group and telepresence video systems found in the conference rooms.

Figure 3. Forecast enterprise video revenue growth 2010 - 2013.



Joining these disparate video devices must be as easy as clicking a mouse, pressing a single phone button, or tapping a touch sensitive screen. This level of seamless interoperability requires systems that adhere to industry standards as well as solution partners with full breadth and depth of technical knowledge so that a unified communications deployment provides a consistent user experience across disparate devices using uniform management and operations processes.

A Wide Array of Enterprise Video Options Abound

Enterprise video solutions today come in a wide range to styles and shapes, offering customers a broad set of price-performance-feature options. At the high end of today’s videoconferencing continuum are “immersive solutions”, otherwise known as telepresence systems. A telepresence video experience delivers high quality audio along with life-size video images displayed in the proper position, which creates the illusion that meeting participants are in the same room. They also allow integrate with group and desktop video solutions, as needed.

Most telepresence systems employ multiple cameras, codecs¹, and large high resolution displays in order to maintain the proper visual imagery and immersive effect. Between one and two megabits of bandwidth per camera is frequently required to achieve this high degree of immersion.

Figure 4. The videoconferencing continuum of products and experience.

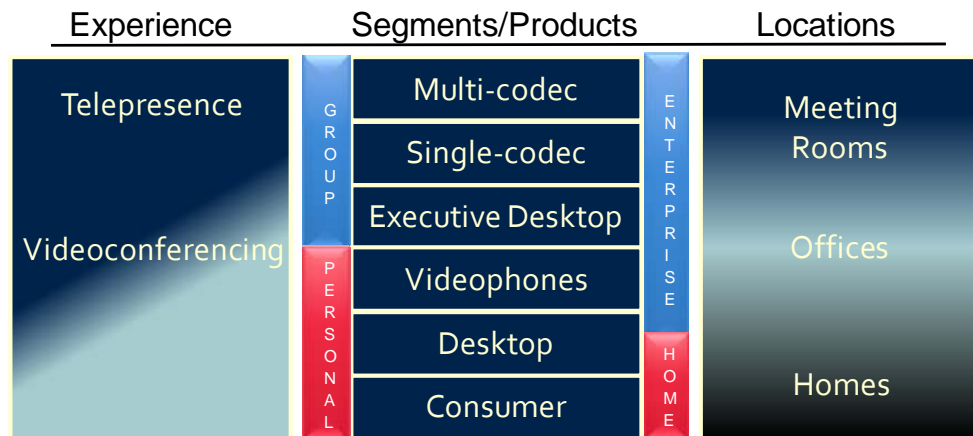


Figure 5. An immersive telepresence video solution with group system integration (right screen).



matters.

Telepresence systems and room design concepts have proven how good the conferencing experience can be when proper attention is paid to lighting and sound details. The success of the telepresence segment supports the argument that the user experience

¹ Codec is a term often used to describe the video hardware or software that is used to compress and decompress the audio and video streams in a videoconferencing system.

One notch below telepresence sits the mainstream of the videoconferencing market – systems designed for conference room use. Over the past four years, this market segment has been transitioning to high definition video, larger screen formats, and rich, wideband audio, thereby providing users with a much richer meeting environment. Most conference room systems today run over highly reliable, low cost broadband IP networks, enabling higher performance videoconferencing.

For personal videoconferencing applications, many enterprises have deployed “executive systems,” which are all-in-one desktop solutions that combine the performance of dedicated videoconferencing hardware with packaging designed for individual use rather than for the conference room. Other personal solutions are based on using a video phone or a PC platform for videoconferencing. A webcam with the appropriate software can easily convert a PC into a visual communications platform that can go anywhere and use any wired or wireless network. Advances in PC hardware and video software now enable HD to the desktop while also providing solutions for the mobile worker.

Figure 6. A high definition executive desktop video device (left) and a video kiosk (right).



New form factors are also appearing in videoconferencing. A form that is emerging in banks and mobile carrier service organizations provides a high definition kiosk-type video device that allows clients to interface with a customer service representative over video. In this type of solution, expertise can be leveraged by allowing highly trained employees to serve customers in many locations, not just the office where they are physically located. There has also been significant discussion of videoconferencing on the mobile world; thus far, however, mobile video is limited to geographical areas where 4G cellular networks exist, and even there, it is restricted in scope. That will change when the iPad and similar devices soon to enter the market are equipped with good video cameras embedded in both sides² of the device’s bezel.

While there are many disparate types of video devices, each with a primary use, organizations need video from all of these devices, regardless of the differences in device type, resolution, and display size, to integrate and interoperate with each other and with other communications capabilities found elsewhere within the enterprise. To even hope for such interoperability and

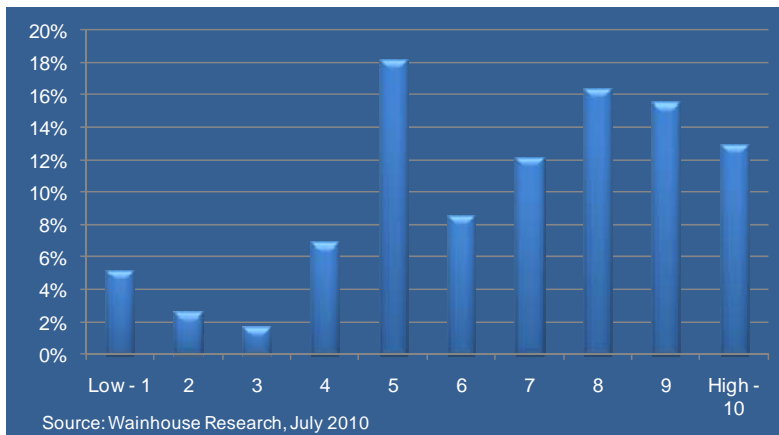
² A video camera is needed on both sides of a smart phone or iPad-like device. With the back camera people can take photos and with the front camera pointing at them, they can participate in videoconferences.

true unified communications, it is imperative to consider video solutions that adhere to industry standards. By selecting standards-compliant products, executives and managers can be confident that their systems will be able to interoperate.

Working Smarter Not Harder

It's sad but true: most companies do not get near the leverage from their investment in video technology that they could and should get. In a 2010 detailed unified communications survey of 136 end users, mostly from large enterprises, respondents were asked how important it is on a scale of 1 to 10 to integrate video with the rest of the unified communications solution (10 being highly important and 1 being of low importance).

Figure 7. End user data signifying the importance of integrating video with enterprise call control on a scale of 1 – 10 with 10 being highly important and 1 being of low importance. (N=136)



These results are distributed heavily to the right, signifying that end users believe video integration with enterprise call is important;

however, we believe that in most enterprises siloed strategies prevail for voice and video, and by extension for instant messaging and presence, conferencing, and unified messaging. As a result, the way people use these communications and collaboration capabilities is disjoint, uncoordinated, and

inherently inefficient.

We believe there is a better way.

Unified Communications Focuses on the User Experience

While the term “unified communications” may connote different things to different people, a few underlying characteristics emerge in UC solution:

1. Presence and voice are fundamental, and
2. Capabilities are joined by some type of an intuitive unified interface.

With these two fundamental characteristics, the actual features and functions that comprise a unified communications solution can be deployed gradually in an evolutionary fashion, or added all at once, in a “big bang” deployment. In either case, as functionality is added, it immediately becomes unified with other capabilities in the solution, eliminating communications silos.

Prior to these unified communications solutions, the end user experience was disjointed and awkward. People were required to decide in advance which communications modality they

wished to use (voice, email, IM, web, video) and to manually set up communications channels independently and separately for each. Typically, those channels could not be changed or augmented while the meeting was in progress.

Contrast that solution to a unified communications paradigm in which users may choose to start with any communications modality they wish, and then add any and all other modalities as needed, seamlessly. These kinds of unified communications capabilities can be integrated into nearly any business process or situation where human interaction or intervention is required.

A well-designed and implemented unified communications system significantly reduces multiple communications mechanisms in favor of more rapid, ad hoc, one-on-one and group meetings facilitated by presence, IM, voice, video, and web conferencing capabilities. These systems integrate real-time media with collaborative services and any devices a person chooses to use within the context of a workflow application.

Figure 8. In a unified communications environment, silos disappear as capabilities are joined together through a common, presence-enabled interface.



Unified Communications Compliments Virtualization and Centralization

Unified communications complements the trend toward centralized telephony call control and virtualization seen elsewhere in the market. Many enterprises are seeing significant efficiency improvement and real cost savings as communications silos are removed through PBX consolidation coupled with integrated communications and collaboration capabilities when possible. Integrating an organization's video capabilities with other communications infrastructure is a natural evolution toward more effective use of the company's communications resources as well as more efficient operation of the overall communications system. Integrating video with the unified communications infrastructure provides at least four tangible benefits:

1. Management overhead is reduced because there is only a single system to run and maintain versus multiple siloed systems. In a converged world where telephones, video units, and collaborative solutions are tightly integrated, this strategy is more easily deployed.

2. People operate telephones and video units in the same manner. Dialing is identical regardless of where the video unit or phone is located - at the desktop, while mobile, or in the conference/telepresence room - they all work the same way. Directories and numbers are the same, so although the dialing interface may be different between a 4x3 touch pad on a telephone versus a group video unit handheld remote, the simple fact remains that to dial, a person simply presses the proper digits on either interface and the call is correctly placed and automatically routed by the common call routing server.
3. When video is integrated into the enterprise call control mechanism, video endpoints automatically inherit the PBX's quality of service management capabilities, such as bandwidth management and call admission control. Audio calls can be instantly enhanced to include video in those times when a face-to-face discussion is warranted, and video can be throttled back if there is sudden bandwidth deterioration. Furthermore, video endpoints can also be included in a consistent dialing plan and directory versus creating a separate directory and dialing mechanism just for the video units.
4. Enterprises that tightly integrate video with the call control mechanism have the ability to blend multiple communications modes into their business applications. Using Web 2.0 programming capabilities, developers can imbed communications capabilities including IM/presence, voice, audio and video conferencing into the line of business application without the need to know the underlying details of how the communications infrastructure works.

Four key advantages companies realize when integrating video with the rest of the UC infrastructure:

1. Reduced management overhead.
2. Consistent user experience and interface when using phones or video.
3. Video inherits the quality of service capabilities call control manager offers.
4. It is easier to embed UC capabilities including IM/presence, voice, audio and video conferencing into line of business applications.

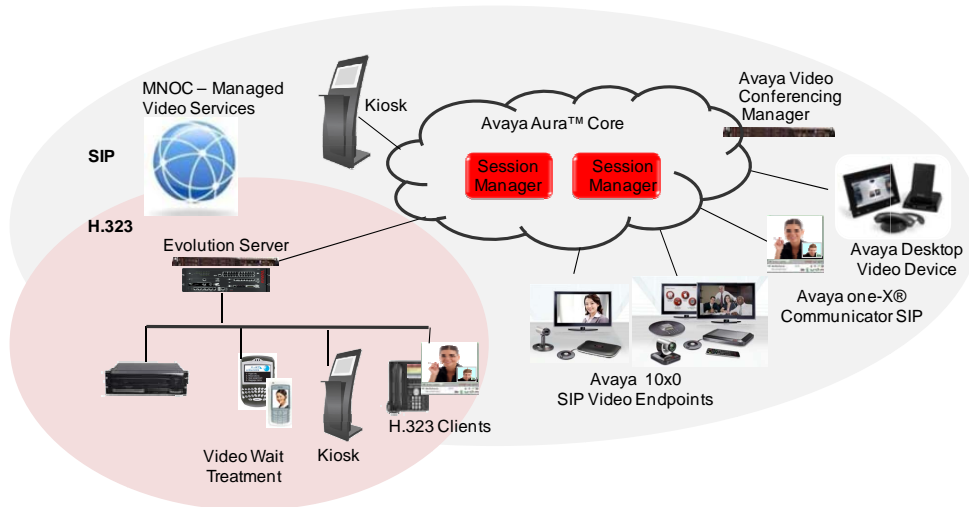
Architecting a Unified Communications Solution

As enterprises plan for unified communications and a migration away from siloed voice, video, and collaboration capabilities, it is important to consider both future directions as well as past purchases. The future for unified communications architectures is clearly a centralized, and possibly virtualized, SIP-based communications infrastructure. All of the major vendors and service providers are moving to this architecture. However, organizations already have hundreds or thousands of phones and video units that are still fully functional yet not fully depreciated. A compelling solution needs to be architected so that it can take an enterprise into the future while allowing it to use both emerging and legacy voice and video devices.

One such solution is Avaya Aura, a SIP-based call control and routing engine designed to provide session control for all communications interactions including SIP devices as well as legacy H.323 phones and video devices. Aura has been architected to reside in the enterprise

cloud, delivering a centralized and unified mechanism for voice, video, collaboration, IM, and presence-based communications.

Figure 9. The Avaya Aura communications architecture.

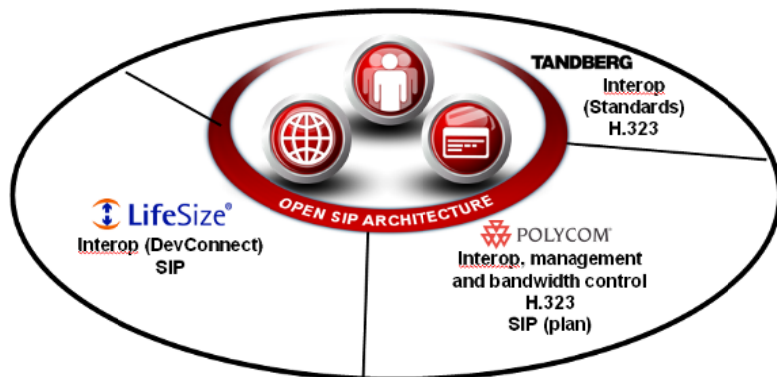


All endpoints, whether they are audio telephones, dedicated executive video displays, group video systems, or immersive telepresence solutions register with Avaya Aura. This solution supports SIP natively and legacy H.323 devices join

through the SIP-H.323 video gateway. Connectivity to H.320 systems can be accomplished using a third-party gateway or multipoint video bridge.

With Aura, participants using a variety of different endpoint types can dial into any video meeting. Desktop video seamlessly integrates with and can connect to standard definition, high definition, or telepresence video systems. Each video endpoint or Meet Me conference is given an enterprise telephone extension, and people connect systems together simply by dialing the telephone number associated with the unit they wish to call or the conference they wish to join.

Figure 10. Avaya’s open standards, SIP-based architecture allows its video endpoints to interoperate with Polycom, Tandberg, LifeSize, and other standards-based video solutions.

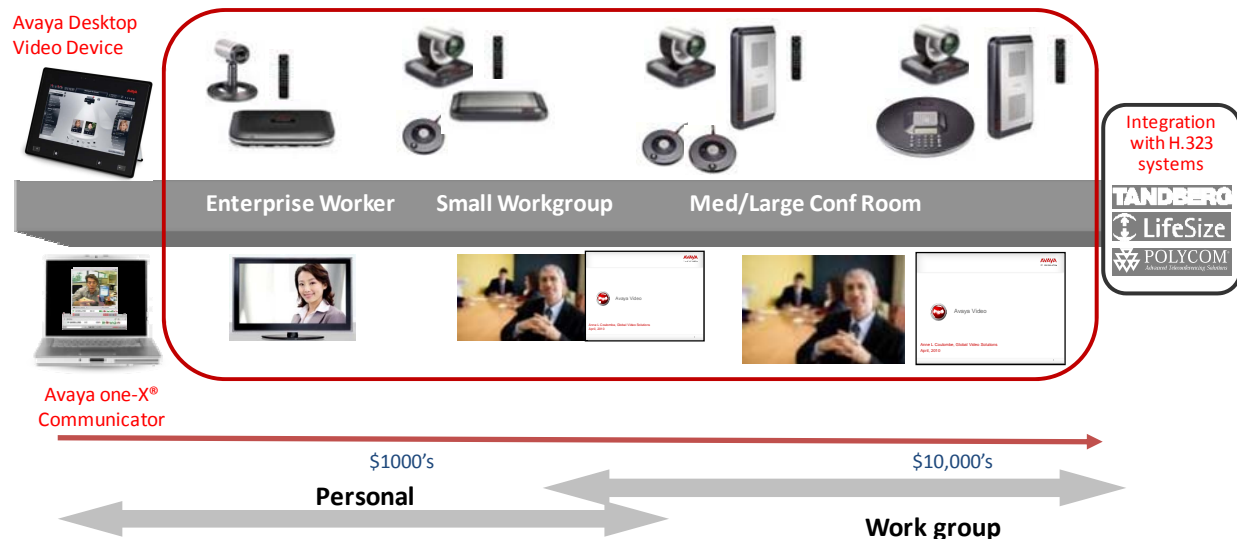


Should enterprises wish to embed unified communications capabilities into their line of business applications, the Avaya Agile Communications Environment (ACE) provides a Web 2.0 programming interface that enables them to do so. With ACE, programmers use high-level XML programming constructs without the need to understand the details of how Aura’s sophisticated real-time communications capabilities work; programs make the communications function calls and Aura takes care of managing the communications sessions.

Avaya Enters the Enterprise Video Endpoint Market

Avaya has a long and rich history with video, serving for many years as a key reseller for major video conferencing manufacturers with the skills and knowhow for integrating video devices from a variety of video vendors. The company has also supported personal video in its one-X™ Communicator and IP Softphone PC-based solutions for over six years. In September 2010, Avaya made a strategic move to expand its video business by announcing the availability of a complete line of Avaya-branded video endpoints.

Figure 11. The new Avaya Video Conferencing Solution.



Avaya's video solutions cover the gamete from high definition multi-screen codecs, to group systems, to executive units, to individual video solutions running on videophones, PCs and smartphones. The company offers these systems at very competitive price points.

Besides the traditional and telepresence videoconferencing solutions sporting large high definition displays, Avaya has developed a truly innovative next generation personal video endpoint in an 11.6 inch (29.5 cm) diagonal tablet form factor. Based on the Android operating system, the Avaya Desktop Video Device (ADVD) has an HD video camera built into its bezel, supporting 720p HD video conferencing at up to 5 Mbps. But this product is much more than a video device. It acts as a unified communications aggregator, providing an appealing, intuitive interface into a user's calendar, contacts, voice messaging, and presence/buddy list, as well as touch-to-call/touch-to-conference capabilities that include voice, video, and web collaboration.

Figure 12. Avaya's Video Desktop Device touch screen



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Avaya's Video Conferencing Device enables a user experience that is contextually aware, naturally collaborative, people centric, action-oriented, and mobile within a Wi-Fi environment. Most of the communications and collaboration capabilities one would need are literally available at the user's fingertips. This "Flair" experience and interface is on the AVVD now, and Avaya plans to deploy Flair experience elements as appropriate to a variety of device types including phones, PCs, video endpoints, and smartphones.

Core to Avaya's video strategy and the Flair experience is open standards. By supporting SIP, H.264, and other industry standards, these video collaboration devices are immediately interoperable with the Polycom, Tandberg, and LifeSize solutions Avaya has sold in the past and will continue to service and support in the future. Avaya and Polycom remain strong partners, having jointly developed code for Polycom video endpoints and MCUs that enables point-to-point video calls originating on the Aura platform to seamlessly transition to multipoint calls on a Polycom RMX video bridge when additional video endpoints are added to a call. This type of borderless video transition fits the paradigm of a unified communications solution where communications is ad-hoc, multimodal, and seamless.

Avaya's Video Services Wrapper and VNOC Services

Unified communications, in general, and video in particular is challenging for many organizations to deploy, monitor, and maintain. Therefore, in addition to offering a complete line of Avaya video endpoints, Avaya also provides a full suite of services to help enterprise's more fully utilize and manage video-enabled unified communications solutions.

Table 1. Services available through Avaya's video network operations centers.

Video Consultancy Services	Video Conferencing Services	Unified Communications Services	Global Support
Network audits	Pre-configured and tested endpoints	Screen/Document Sharing	7x24x365 Operation
Solution Design	Proactive Monitoring	Meeting Recording	4 Video Network Operations Centers
Program Management	Universal Bridging	Outlook Integration for Meeting Scheduling	Multi-lingual support
	Session Security		Support for voice, data, and video
	Concierge, Reservation, and Help Desk		

Avaya's video services wrap focuses on the end user experience, ensuring that all aspects of the solution are always on, connected, and ready when meetings are set to start. These services ensure that both ad-hoc meetings and scheduled meetings work on time, every time.

One of the challenges many organizations face is integrating video from different device types together in the same meeting. Avaya's video network operations center (VNOC) has the capability to integrate video from 21 different video device types in the same meeting. This capability is particularly useful for the owners of telepresence units, almost all of whom need to include, at one time or another, an individual contributor with a video-enabled PC. For some telepresence solutions, including desktop video is very challenging. Avaya's VNOC does this every day and makes it simple to include not just PC video solutions, but emerging smartphone video and touch pad solutions, into telepresence and group meetings.

Avaya's VNOC is different from other managed video services; in many managed services, only the high end telepresence or expensive group deployments have concierge and white glove services. With Avaya's VNOC, help desk, concierge and white glove service is available to all video users regardless of endpoint type. This assures that video users with limited or no access to telepresence suites get the same level of service those with telepresence suites get. Broad, equal opportunity video services are key for successful group and desktop video deployments, whether provided internally by the enterprise, or through a video service provider like Avaya's Video Network Operating Center.

Avaya video NOCs are located in Ottawa, Canada; Maidenhead, UK; Raleigh, North Carolina, USA; and Bangalore, India. These VNOC services are so reliable that Polycom uses Avaya's video services to run its own video demonstration centers worldwide. Avaya sells its VNOC services both directly and through partners. Polycom resells Avaya's VNOC service through its own channel.

What are Customers Doing?

Avaya has helped its customers deploy over 25,000 video endpoints in hospitals, insurance companies, financial institutions, retail, and call centers. Three examples are shown below.

Healthcare

Harborview Medical Center in Seattle, Washington uses Avaya's Video Conferencing Solution in examination rooms to provide interpreters for non-English-speaking patients. Harborview serves a large number of patients for which English is a second language. These patients require interpretation for accurate diagnosis and treatment.

Figure 13. A medical staff member translating between a doctor and a patient using Avaya's Video Conferencing Solution.



Call Center

Citibank has rollout Avaya's integrated video kiosks across Japan to enable highly skilled banking personnel better serve customers.

Figure 1. A Citibank video kiosk.



A large US mobile telephone provider has placed Avaya-enabled video kiosks in 150 retail stores providing remote expertise locally.

Figure 14. A mobile carrier video kiosk.



Insurance

A large multinational Asian insurance company relies heavily on video, both group and personnel, to do its business. This company has a culture of interpersonal interaction between its managers and its employees. Remote managers stay in contact with their teams using the personal intimacy video offers. A team may be in one or more conference rooms or individual team members can be connected by their own one-X Communicator. video telephony

Figure 15. A manager using Avaya One-X Communicator while traveling.



3G/4G Video Call Center

Our final example is an extension of the video call center for use by callers located in areas where 3G/4G cellular networks exist that can support live two-way video. Avaya has extended its contact center self-service solutions to support live one-way video from an Interactive Voice and Video Response system to the caller to support self-service applications.

Figure 16. Video streamed back to the 3G mobile phone may be menu item selections, pictures, live streams, or any other video content the call center agent chooses.



It has also extended its contact center agent solutions to support a two-way live video conversation between a mobile caller and a contact center agent. This solution is currently being used in some deployments in Europe and the Asia Pacific region. Video to the mobile handset has relevance in customer service applications, maintenance, and any other activity in which a mobile handset user will benefit from the ability to view an interactive menu, a live agent, or application and recorded content shared by an agent.

Measuring the Business ROI Video Delivers

Justifying a video conferencing deployment requires analysis of both hard and soft benefits. The low hanging fruit for a video conferencing deployment often lies in reducing travel costs, and this is the justification behind most telepresence video sales as well as many group and personal video device deployments. However, although they are more difficult to measure numerically, the soft benefits can and often do have as much or more impact on the organizations who deploy video.

In countries deploying telehealth solutions, who can calculate the value of a patient living in a remote area being able to see a doctor in a timely fashion? And this is not just in developing countries – even developed countries, like Canada, who is deploying telehealth solutions in its far flung provinces, are seeing tremendous benefits.

Some companies are seeing significant increases in sales force effectiveness when video is used, often in conjunction with web collaboration and other forms of digital media. We are aware of a technology company that saves \$550 per avoided sales trip while at the same time increasing customer touches by over 40% using video and other remote collaboration technologies. For sales personnel, video is so much more intimate than just a web conference, and sales results can show it.

Video is often used by break-fix and troubleshooting personnel. In some aircraft maintenance situations, the technicians carry a wireless video device which can be used both for the human interaction as well as for troubleshooting in real time an issue with an airplane. This kind of video usage is becoming more and more widespread in all facets of manufacturing.

Even the entertainment industry uses videoconferencing to save days and months of time and to make business more real-time. For example, the director in the “Lord of the Rings” trilogy used video conferencing to enable filming concurrently in multiple locations. Footage from the cameras was transmitted over high-bandwidth networks to editing studios or to other filming locations, which significantly shortened the time to make the films and was a source of major cost savings.

In the table below, we list many of the business benefits video brings to organizations all over the world.

Table 2. The business benefits companies and organizations are achieving today using video communications.

Business Benefits Video Delivers	Comments
Travel Savings	This is the most common hard dollar use case, and real travel cost savings can be calculated. The key is being able to roll these savings up to a top line number. In many organizations, travel costs are distributed broadly throughout the company. Some effort will need to be expended to accurately identify all of the actual cost savings that accrue.
Building Better Understanding	Being able to see other people and what their body language says is a key use case for video. Video allows much better comprehension of what people are saying and what others understand. Video is very helpful in multicultural communications situations or in situations where second languages are used. Video also helps bring disparate teams together in situations where people do not know each other, such as vendor/supply chain management situations.
Enhancing Relationships	Video provides much greater intimacy in a conversation than does an audio-only communication. Along with building better understanding, video allows distributed individuals and teams to forge stronger relationships due to the face-to-face interaction. For example, managers will often have more success managing remote employees when video conversations are employed from time to time. Financial institutions working with high net worth individuals often set up video interactions with these individuals to maintain and establish strong working relationships and relationships of trust.
Sharing of Expertise	Numerous examples of sharing expertise by using video exist. Healthcare is a prime example where the scarce resources of medical expertise can be expanded because the expert can be remote. Other examples include remote diagnostic and repair, monitoring, consultations, remote insurance claims agents, specialized banking services, etc.
Conveying	Video is the richest communications medium available. In many

Information	instances, much more information can be exchanged through a video interaction than through audio and even audio and web conferencing combined. Examples include training, distance education, and other activities where the surroundings provide significant visual cues.
Faster Decision Making	Many situations arise where video coupled with collaboration enable people to make better decisions faster. Examples include command and control operations, like the military, production floors, and disaster or emergency situations.
Better Environmental Practices	Given the current interest in climate change and global warming, video has the ability to reduce certain greenhouse gas emissions by reducing the amount of automobile, plane, train, and other types of travel. For companies with green initiatives, video conferencing is one way to significantly improve and promote green operations.

Conclusion

As organizations roll out more and more video, whether on the desktop, in group videoconferencing rooms, in telepresence suites, over video kiosks, or through video-enabled smartphones and handheld devices, business video is becoming pervasive. Companies need a consistent user experience across devices as well as a means for tying together all of these devices and capabilities within the fabric of the enterprise's unified communications deployment. Video brings a dynamic and life to a unified communications deployment unmatched by any of the other UC capabilities in the solution.

Enterprises will be well served by considering how they will organize, manage, and integrate video within the rest of the organization. The need for a consistent, standards-based mechanism for call control which includes both voice and video seems obvious, yet it remains elusive for many companies.

Avaya Aura is a session management and call control platform designed to unify voice, video, and collaboration mechanisms within the enterprise while providing a consistent user experience and coherent management controls across devices and capabilities. Aura can interface with the new line of Avaya video endpoints as well as with standards-based video solutions from other vendors, delivering the consistency in user experience and management capabilities organizations seek. The new Android-based Desktop Video Device provides a revolutionary interface and user experience for executives and individuals who rely on a variety of communications channels frequently. Avaya's solution offering includes managed video services through the company's four geographically dispersed video network operations centers.

Enterprises should consider how they will unify their voice and video systems to make them easy to use, easy to manage, and easy to integrate with the rest of the capabilities available in a unified communications solution. A consistent user experience is essential, standards-based

interoperability is critical, and straightforward voice and video integration into line of business and workflow applications will provide real business ROI.

About the Author

E. Brent Kelly is a Senior Analyst and Partner at Wainhouse Research specializing in unified communications applications and enabling infrastructure. Brent has authored numerous reports and articles on unified communications including mobile unified communications solutions, detailed reviews of Microsoft's UC strategy as embodied by Office Communications Server, IBM Lotus Sametime and IBM Lotus' UC² Strategy, and Telephony-Based Unified Communications, which is a thorough description of PBX vendor unified communications offerings. He has also written reports about migrating to IP communications, video network service providers, and the collaborative reseller channel. Dr. Kelly has authored articles for Business Communications Review Magazine, NoJitter.com, and he has taught workshops in North and South America, Europe, and Australia as well as at major industry events such as VoiceCon. With over 21 years experience in developing and marketing highly technical products, Brent has served as an executive in a manufacturing firm where he developed and implemented a manufacturing, marketing, and channel strategy that helped land national accounts at major retailers. Previously, he was part of the team that built the devices Intel used to test their Pentium microprocessors. He has also led teams developing real-time data acquisition and control systems, and adaptive intelligent design systems for Schlumberger. Brent has worked for several other multinational companies including Conoco and Monsanto. Dr. Kelly has a Ph.D. in engineering from Texas A&M and a B.S. in engineering from Brigham Young University. He can be reached at bkelly@wainhouse.com.

About Wainhouse Research

Wainhouse Research, www.wainhouse.com, is an independent market research firm that focuses on critical issues in the Unified Communications and rich media conferencing fields. The company conducts multi-client and custom research studies, consults with end users on key implementation issues, publishes white papers and market statistics, and delivers public and private seminars as well as speaker presentations at industry group meetings. Wainhouse Research publishes a variety of reports that cover the all aspects of rich media conferencing, and the free newsletter, *The Wainhouse Research Bulletin*.

About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit www.avaya.com.